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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

(Rationalised Report according to the Notice of the President of the EPO published in the OJ11/2001)

Applicant's or agent's file reference IISC/NF/02	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/IN03/00281	International filing date (day/month/year) 26/08/2003	Priority date (day/month/year) 03/02/2003
International Patent Classification (IPC) or national classification and IPC G01F1/688		
Applicant INDIAN INSTITUTE OF SCIENCE et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This **REPORT** consists of a total of 2 sheets, including this cover sheet.

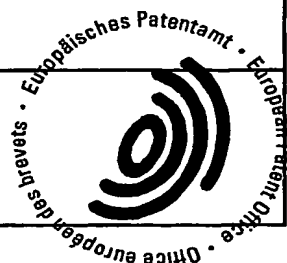
☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consists of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 02/09/2004	Date of completion of this report 09/03/2005
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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No.

PCT/IN03/00281

I. Basis of the report

The basis of this international preliminary examination is the application as originally filed.

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability

In light of the documents cited in the international search report, it is considered that the invention as defined in at least some of the claims does not appear to meet the criteria mentioned in Article 33(1) PCT, i.e. does not appear to be novel and/or to involve an inventive step (see international search report, in particular the documents cited X and/or Y and corresponding claim references).

INTERNATIONAL SEARCH REPORT

In International Application No
PCT/IN 03/00281

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01F1/688 G01F1/684 H02N11/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01F H02N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GHOSH S ET AL: "Carbon nanotube flow sensors" SCIENCE (USA), SCIENCE, 14 FEB. 2003, AMERICAN ASSOC. ADV. SCI, USA, vol. 299, no. 5609, 16 January 2003 (2003-01-16), pages 1042-1044, XP002279249 ISSN: 0036-8075 cited in the application published online on 16.01.2003: DOI: 10.1126/SCIENCE.1079080 the whole document	11-13, 16,17, 21-23, 25-34, 37,41, 42, 44-53, 56,57, 61,62, 64-71
A	----- -/--	1-3,6-10

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

10 May 2004

Date of mailing of the international search report

26/05/2004

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/IN 03/00281

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 691 408 A (ROSSO JOHN B) 12 September 1972 (1972-09-12)	32-34, 37,41, 47-53, 56,57, 61,62, 67-71
A	column 2, line 66 - column 4, line 13; figures	35,36, 38-40, 42,43, 54,55, 58-60, 63-66
X	KRAL P ET AL: "Nanotube electron drag in flowing liquids" PHYS. REV. LETT. (USA), PHYSICAL REVIEW LETTERS, 1 JAN. 2001, APS, USA, vol. 86, no. 1, 1 January 2001 (2001-01-01), pages 131-134, XP002279250 ISSN: 0031-9007 cited in the application	11-13, 16,17, 21-23, 25-34, 37,41, 42, 44-53, 56,57, 61,62, 64-71
P,A	the whole document	
	CHUNG J ET AL: "Multi-walled carbon nanotube sensors" 2003, PISCATAWAY, NJ, USA, IEEE, USA, 2003, pages 718-721 vol.1, XP001181228 ISBN: 0-7803-7731-1 the whole document	1-71
X	US 4 744 246 A (BUSTA HEINZ H) 17 May 1988 (1988-05-17)	11-14, 16-18, 20-24, 28-31
A	column 4, line 4 - column 7, line 52; figures	15,19
X	US 4 680 963 A (INAGAKI HAZIME ET AL) 21 July 1987 (1987-07-21)	11-14, 16,17, 22,28-31
	column 3, line 42 - column 5, line 33; figures 1,2	
X	US 5 446 437 A (BANTIEN FRANK ET AL) 29 August 1995 (1995-08-29)	11-14, 16,17, 22,28-31
	column 2, line 61 - column 5, line 56; figures	
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INTERNATIONAL SEARCH REPORT

Int. Patent Application No
PCT/IN 03/00281

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 4 373 386 A (SCHUDDEMAT JACOB P ET AL) 15 February 1983 (1983-02-15)</p> <p>column 3, line 47 - column 6, line 7; figures</p> <p>-----</p>	<p>11-14, 16,17, 22,28-31</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IN 03/00281

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3691408	A	12-09-1972	NONE	
US 4744246	A	17-05-1988	NONE	
US 4680963	A	21-07-1987	JP 1787473 C JP 4076412 B JP 61170618 A	10-09-1993 03-12-1992 01-08-1986
US 5446437	A	29-08-1995	DE 4202733 A1 JP 5273053 A	05-08-1993 22-10-1993
US 4373386	A	15-02-1983	NL 7905356 A CA 1146771 A1 DE 3025720 A1 FR 2468912 A1 GB 2053491 A JP 57010459 A	13-01-1981 24-05-1983 05-02-1981 08-05-1981 04-02-1981 20-01-1982